

Pines and Fungus This Spring

Published 3/18/20 – Image titled “Needle tips turning brown on Austrian pine” photo credit: Jill O’Donnell, Michigan State University Extension

It seems like when we start talking about diseases, fungal problems are a usual suspect and they definitely can be common in gardens and landscapes throughout the continent. Cool and wet springs, overhead watering, dense planting, lack of air movement, and late-day watering can all contribute to the development of these infections. In many cases the plants are strong enough to withstand the challenge but if the plants are under stress the fungus can grow faster and more vigorously causing some serious problems.



It appears that last year's much wetter than normal spring and summer negatively affected a lot of tree roots. When wet conditions noticeably raise the water table, the first kinds of plants affected are trees as they have deeper root systems. Water displaces air effectively overwhelming the roots which can not only compromise the root's ability to transport nutrients and water to the rest of the plant but even to the point of killing those roots. With the same above ground material but much less root, the tree falls into a stress situation.

Signs of trees with *Dothistroma* needle blight can be seen scattered throughout the area but has become very noticeable in neighborhoods where the water levels rose the most. Just driving around town it's easy to spot *Dothistroma* in tall pines made even easier before the deciduous trees have fully leafed out for the year. In a few unfortunate areas just about every tree is infected but it's more common to see a single tree heavily infected while it's neighbors remain mostly unscathed. Long needled pines like Austrian and Ponderosa are the most common species affected.

Partial browning completely encircling the needle start on needles that have been infected for more than a year. The browning starts at the tips and works it's way to the base on all sides of the tree, perhaps more severe on the lower branches. Seen from a distance, the uniform browning throughout the tree is the classic *Dothistroma* characteristic. Up close, diseased needles have tanish-yellow spots on needles that are still green, spots that over time darken and expand to form dark brown rings completely around the circumference of the needle.

Treatment for *Dothistroma* is relatively easy for homeowners, the only challenge being on very tall trees. Copper fungicides, available as a liquid or powder form, is the treatment. This is a contact treatment so complete spraying covering all needles is required. Infected trees should be sprayed just before the new growth is starting to bud, which for this year is now, then treated again mid-summer after the new growth have fully grown.

Without treatment a severe infestation left alone for a couple of years may be enough to cause the tree's death. Copper spray, eliminating any lawn irrigation that touches the needles, plenty of space around individual trees, removal of the lowest branches, weed removal under the tree, and a 3-4" mulch layer all help reduce *Dothistroma* as well as other fungal infestations.

Art Smith is a co-owner of East Pierre Landscape and Garden Center, 5400 SD Hwy 34, Pierre